WHAT IS CLAIMED IS:

1. An alignment method for eliminating process bias error, comprising:

forming at least three first trenches on a mark area to form a first polygon

5   having a first geometric center on a substrate, a shape of the first trenches

being a bar with two reducing-width-to-zero ends;

depositing a thin film on the substrate, the thin film forming second

trenches in the first trenches, respectively;

connecting two ends of each second trench with a second line to form a

10   second polygon having a second geometric center; and

performing a photolithography process using the second geometric

center as an alignment target for patterning the thin film.

2. The method of claim 1, wherein a shape of the first trenches is a

15   spindle.

3. The method of claim 1, wherein the first polygon and the second

polygon are triangles.

20   4. The method of claim 1, wherein the first polygon and the second

polygon are squares.

5. The method of claim 1, wherein the thin film comprises a metal film.

25   6. An alignment method for eliminating process bias error, comprising:

11

forming at least two first trenches, being non-parallel, on a mark area of a substrate so that respective extension lines of the two first trenches intersect each other at a first intersection, a shape of the first trenches being a bar with two reducing-width-to-zero ends;

5   depositing a thin film on the substrate, the thin film forming second trenches in the first trenches, respectively;

connecting two ends of each second trench with a second line, wherein the second lines intersect with each other on a second intersection; and

performing a photolithography process using the second intersection as

10   an alignment target for patterning the thin film.

7. The method of claim 6, wherein the shape of the first trenches is a spindle.

15   8. The method of claim 6, wherein the thin film comprises a metal film.

9. An alignment method for eliminating process bias error, comprising:

forming at least a first trench on a mark area of a substrate, a shape of the first trench being a crossbar with four reducing-width-to-zero ends, two first

20   lines respectively connecting two opposite ends of the first trench to form a first cross;

depositing a thin film on the substrate, the thin film forming a second trench in the first trench;

connecting opposite two ends of the second trench with second lines to

25   form a second cross; and

12

performing a photolithography process by using a center of the second

cross as an alignment target for patterning the thin film.

10. The method of claim 9, wherein the shape of the first trenches is a

cross-spindle.

11. The method of claim 9, wherein the thin film comprises a metal film.

12. An alignment mark for eliminating process bias error, comprising:

at least three trenches on a mark area to form a polygon having a

geometric center on a substrate, a shape of the trenches being a bar with two

reducing-width-to-zero ends, and a line, connecting the two ends of each trench,

being parallel to two edges of the bar.

13. The alignment mark of claim 12, wherein the shape of the trenches is

a spindle.

14. The alignment mark of claim 12, wherein the polygon is a triangle.

15. The alignment mark of claim 12, wherein the polygon is a square.

16. An alignment mark for eliminating process bias error, comprising:

at least two trenches, being non-parallel, on a mark area of a substrate

so that respective extension lines of the two trenches cross each other at an

intersection, a shape of the trenches being a bar with two

reducing-width-to-zero ends, and a line, connecting two ends of each trench, being parallel to two edges of the bar.

17. The alignment mark of claim 16, wherein the shape of the trenches is a spindle.

18. The alignment mark of claim 16, wherein the two trenches cross over each other to form a cross-shaped trench.

10